APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,779	01/26/2001	Simon H. Corston-Oliver	M61.12-0682	7875

27366	7590	01/18/2006

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EXAMINER
WOZNIAK, JAMES S

ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 01/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 October 2005</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-31</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) <u>1-17 and 19-31</u> is/are rejected.

7)☒ Claim(s) <u>18</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>26 January 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   In response to the office action from 9/6/2005, the applicant has submitted an

amendment, filed 10/28/2005, amending claims 1, 19, and 25, while arguing to traverse the art

rejection based on the amended claim limitations *(Amendment, Pages 10-12)*. The applicant's

arguments have been fully considered but are moot with respect to the new grounds of rejection

in view of Lu et al *(U.S. Patent: 5,410,475)*.

2.   Based on the amendments to claim 1, the examiner has withdrawn the previous

objections directed towards minor informalities.

3.   The applicant has not officially challenged the official notice taken with respect to claim

17 regarding URLs and email addresses that are maintained in uncompressed form in any of the

prior office actions, thereby making the use of such uncompressed text portions the applicant's

admitted prior art.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   **Claims 1 and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Grefenstette *(U.S. Patent: 6,289,304)* in view of Lu et al *(U.S. Patent: 5,410,475)*.

With respect to **Claims 1 and 25**, Grefenstette discloses:

Performing a linguistic analysis on the body of text to obtain a linguistic output indicative

of linguistic components of the body of text *(part-of-speech analysis and tagging, Col. 7, Lines*

25-43); and

After performing the linguistic analysis, generating a plurality of compression options for

each of a plurality of different portions of the body of text to compress the body of text based on

the linguistic output *(compression techniques based on part-of-speech tagging and reduction*

levels, wherein different parts of speech (text portions) within a body of text have different

compression options at a particular reduction level, Col. 7, Line 44- Col. 8, Line 64; text

summarization as an automatic process, Col. 2, Lines 23-32; and various compression levels,

Fig. 4).

Although Grefenstette teaches generating a plurality of compression options (levels) for a

portion of input text, Grefenstette does not specifically disclose automatically generating

multiple compression options that comprise different compressed forms of an instance of a text

portion for selection, however Lu teaches a system utilizing linguistic analysis *(dictionary*

lookup, tokenization, and parsing, Col. 4, Lines 20-48) prior to automatically generating and

presenting multiple compression options (abbreviated forms) corresponding to an input text for

selection either by a user or automatically through a ranking algorithm *(Col. 30, Lines 46-58)*.

Grefenstette and Lu are analogous art because they are from a similar field of endeavor in

text compression. Thus, it would have been obvious to a person of ordinary skill in the art, at the

time of invention, to modify the teachings of Grefenstette with the system for generating and

presenting multiple abbreviated forms of an input text as taught by Lu in order to provide a

means for ambiguity resolution when multiple abbreviations correspond to input text *(Lu, Col. 3,*

Lines 37-60).

6.   **Claims 2-13, 15-16, 26-31** are rejected under 35 U.S.C. 103(a) as being unpatentable

over Grefenstette *(U.S. Patent: 6,289,304)* in view of Lu et al *(U.S. Patent: 5,410,475),* and

further in view of Kudrolli et al *(U.S. Patent: 6,279,018).*

With respect to **Claims 2 and 26,** Grefenstette in view of Lu teaches the method and

system for generating a plurality of compressions corresponding to an input text, as applied to

claims 1 and 25. Grefenstette in view of Lu does not specifically suggest that generated

compression options are a result of subjecting text portions to different compression rules,

however Kudrolli discloses various abbreviation rules utilized in the generation of compressed

text *(Col. 17, Line 25- Col. 25, Line 44).*

Grefenstette, Lu, and Kudrolli are analogous art because they are from a similar field of

endeavor in text compression/reduction. Thus, it would have been obvious to a person of

ordinary skill in the art, at the time of invention, to modify the teachings of Grefenstette in view

of Lu with the method for rules for generating a plurality of text compressions as taught by

Kudrolli in order to shorten text to desired size limit to allow a user to view complete text

documents on a display with limited space *(Col. 26, Lines 27-30 and Col. 1, Lines 56-67).*

With respect to **Claims 3 and 27**, Kudrolli discloses:

Subjecting each portion of the body of text to the different sets of compression rules in a predetermined order such that the compression options reflect varying degrees of compression of a same portion of the body of text *(Col. 33, Lines 9-42; Figs. 11-16)*.

With respect to **Claims 4 and 28**, Kudrolli discloses:

Generating a compression identifier attribute indicative of at least one of the sets of compression rules to which the portion of the body of text is subjected *(Col. 29, Lines 28-40 and Fig. 11)*.

With respect to **Claim 5**, Kudrolli discloses:

Generating a ShortForm attribute indicative of a compressed form of the portion of the body of text after application of the set of compression rules *(word abbreviations, Figs. 11-15)*.

With respect to **Claim 6**, Kudrolli discloses:

Generating a case normalized attribute, based on the ShortForm attribute, indicative of a CaseNormalizedForm of the ShortForm attribute *(word abbreviations having a first letter capitalized, Figs. 11-15)*.

With respect to **Claims 7 and 8**, Kudrolli discloses:

Applying letter removal rules to the case normalized attribute to remove letters based on a predetermined location of the letters in the CaseNormalizedForm *(removal of vowels and consonants unnecessary for comprehension from abbreviated words to further reduce text size, Figs. 11-15 and position of characters, Col. 15, Lines 54-56)*.

With respect to **Claim 9**, Grefenstette further shows:

Generating a LongForm attribute that reflects substantially no compression of the portion

of the body of text *(text format in which no reduction is performed, Fig. 5)*.

With respect to **Claim 10**, Kudrolli discloses:

Setting the case normalized attribute and the compression attribute to the ShortForm

attribute *(abbreviation data file used to further reduce the size of text- for example, compressing*

ForYourInformation to FYI, Col. 23, Table 5).

With respect to **Claim 11**, Grefenstette further recites:

Applying the set of compression rules based on the syntactic analysis *(markers based on*

syntactic analysis, Col. 7, Lines 44-67, that act as a removal criterion for particular reduction

levels, Col. 8, Lines 1-64).

With respect to **Claim 12**, Grefenstette additionally recites:

Performing a lexical analysis on the body of text; and performing a morphological

analysis on the body of text *(part-of-speech analysis for determining a word group type and*

morphological analysis, Col. 7, Lines 25-43).

With respect to **Claim 13**, Kudrolli discloses:

Normalizing dates to a numerical form *(enumeration words to numeric digits conversion*

for dates in the case of a non-numeric data input, Col. 42, Lines 46-54).

With respect to **Claims 15 and 16**, Kudrolli discloses:

Maintaining text fragments that cannot be accurately understood unless maintained fully

intact, in uncompressed form *(Col. 14, Line 66- Col. 15, Line 4)*.

Claims 29 and 30 contain subject matter similar to Claims 5-7, and thus, are rejected for

the same reasons.

Claim 31 contains subject matter similar to Claim 9, and thus, is rejected for the same reasons.

7.   **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over Grefenstette *(U.S. Patent: 6,289,304)* in view of Lu et al *(U.S. Patent: 5,410,475)*, in view of Kudrolli et al *(U.S. Patent: 6,279,018)*, and further in view of the applicant's admitted prior art.

With respect to **Claim 17**, Grefenstette in view of Lu, and further in view of Kudrolli teaches the text compression technique in which symbol sensitive text fragments are maintained, as applied to Claim 16. Grefenstette in view of Lu, and further in view of Kudrolli does not specifically suggest that URLs and email addresses are maintained in uncompressed form; however, it is the applicant's admitted prior art that it is well known in the art to maintain symbol sensitive fragments (such as URLs and email addresses) in text compression because the text would be altered if compressed, thus losing an original meaning. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to maintain URLs and email addresses in text compression so as to prevent loss or distortion of meaning, to obtain the invention as specified in Claim 17.

8.   **Claims 19-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Grefenstette *(U.S. Patent: 6,289,304)* in view of Kudrolli et al *(U.S. Patent: 6,279,018)*, and further in view of Lu et al *(U.S. Patent: 5,410,475).*

With respect to **Claim 19**, Grefenstette teaches the process of linguistic analysis utilizing part-of-speech tagging in text compression as applied to Claims 1 and 25. Grefenstette does not

specifically disclose a data structure having different sections relating to a textual term comprising a plurality of data fields representing a plurality of different compressed forms of the textual term, however Kudrolli shows such a structure in Figs. 15-16.

Grefenstette and Kudrolli are analogous art because they are from a similar field of endeavor in text compression/reduction. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Grefenstette with the data structure having a plurality of term compressions as taught by Kudrolli to provide a means of shortening text until a desired size limit is reached to allow a user to view complete text documents on a display with limited space *(Col. 26, Lines 27-30 and Col. 1, Lines 56-67)*.

Grefenstette in view of Kudrolli does not teach the feature that allows the selection of one of a plurality of compressed text formats, however Lu teaches such a feature *(Col. 30, Lines 46-58)*.

Grefenstette, Lu, and Kudrolli are analogous art because they are from a similar field of endeavor in text compression/reduction. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Grefenstette in view of Kudrolli with the for generating and presenting multiple abbreviated forms of an input text for selection as taught by Lu in order to provide a means for ambiguity resolution when multiple abbreviations correspond to input text *(Lu, Col. 3, Lines 37-60)*.

Claim 20 contains subject matter similar to Claim 4, and thus, is rejected for the same reasons.

Claim 21 contains subject matter similar to Claim 5, and thus, is rejected for the same reasons.

Claim 22 contains subject matter similar to Claim 6, and thus is rejected for the same reasons.

Claim 23 contains subject matter similar to Claim 7, and thus is rejected for the same reasons.

Claim 24 contains subject matter similar to Claim 9, and thus is rejected for the same reasons.

9.   **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Grefenstette *(U.S. Patent: 6,289,304)* in view of Lu et al *(U.S. Patent: 5,410,475)*, in view of Kudrolli et al *(U.S. Patent: 6,279,018)*, and further in view of Allen et al *(U.S. Patent: 6,026,410)*.

With respect to **Claim 14**, Grefenstette in view of Lu, and further in view of Kudrolli teaches the method and system for generating a plurality of compressions corresponding to an input text, as applied to Claim 5. Grefenstette in view of Lu, and further in view of Kudrolli does not specifically suggest normalizing an offset date from a current date into a numerical form, however Allen teaches such an offset date normalization means *(Col. 16, Line 24- Col. 17, Line 60)*.

Grefenstette, Lu, Kudrolli, and Allen are analogous art because they are from a similar field of endeavor in text processing. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Grefenstette in view of Lu, and further in view of Kudrolli with the offset date normalization means taught by Allen in order to provide a means of interpreting dates from natural language *(Allen, Col. 16, Lines 24-27)*.

Allowable Subject Matter

10.   **Claim 18** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11.   The following is a statement of reasons for the indication of allowable subject matter:

With respect to **Claim 18**, the prior art fails to explicitly teach or fairly suggest either individually or in combination, a method for performing text compaction that subjects each portion of a text message to multiple compression rules in a predetermined order based on an initial syntactic analysis, which utilizes a tree having nodes representing multiple and single word portions of an input text, for compression selection by a user, wherein each text compression contains an identifier indicative of the utilized compression rule. Although Marcu et al *(U.S. Patent Publication: 2002/0046018)* teaches the use of a parse tree in text compression *(Paragraphs 176-195)*, Marcu fails to teach that the tree comprises nodes representing multiple and single word portions in the input text and the examination of those nodes for the application of the multiple compression rules.

Conclusion

12.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

13.   The prior art made of record and not relied upon is considered pertinent to applicant's
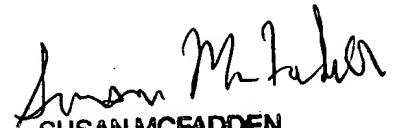
disclosure:

Kupiec et al *(U.S. Patent: 6,766,287)*- teaches a system for document summary that

utilizes sentence usefulness scores to enable selection of an appropriate summary sentence.

14.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632.

The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
12/9/2005

SUSAN MCFADDEN
PRIMARY EXAMINER